

Appl. No. : 10/787,063
Filed : February 25, 2004

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 10, 19, and 21-22 as follows:

1. (Currently Amended) An exhaust header for collecting exhaust gases from an internal combustion engine, the exhaust header comprising:

a plurality of flanges, each having a recessed sealing surface that is configured to circumscribe an exhaust port on an internal combustion engine, wherein at least a portion of the recessed sealing surface is configured so as to support therein a gasket in a manner such that at least a portion of the gasket is exposed to gas flowing out the exhaust port inside of the flange;

a plurality of gaskets comprising graphite, each located in the recessed sealing surface and configured to form separate seals between each flange and the engine around the exhaust port;

a plurality of head pipes in flow communication with the plurality of flanges and configured to route exhaust gases from the plurality of flanges; and

a collector having a plurality of inlet ports connected to the plurality of head pipes.

2. (Original) The exhaust header of Claim 1, wherein the flange comprises two bolt holes.

3. (Original) The exhaust header of Claim 2, wherein one of the two bolt holes is open to an edge of the flange.

4. (Previously Presented) The exhaust header of Claim 1, wherein the flange comprises a chamfered inside surface so as to provide a transition between an inner surface of the flange and an inside diameter of the head pipe.

5. (Original) The exhaust header of Claim 1, wherein a depth of the recessed sealing surface is approximately 0.1 inches.

6. (Original) The exhaust header of Claim 1, wherein the recessed sealing surface has a substantially circular shape.

7. (Original) The exhaust header of Claim 1, wherein the recessed sealing surface has a substantially rectangular shape.

8. (Original) The exhaust header of Claim 7, wherein the graphite gasket comprises metal reinforcement.

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9. (Original) The exhaust header of Claim 1, wherein the graphite gasket has a melting temperature of at least 2000 degrees Fahrenheit.

10. (Currently Amended) An apparatus configured to attach an exhaust pipe to an engine head to form an exhaust header for collecting exhaust gases from one or more exhaust ports from a cylinder of an internal combustion engine, the apparatus comprising:

a flange having a passageway extending therethrough, said flange further comprising:

a recessed seal surface configured so as to support therein a gasket in a manner such that at least a portion of the gasket is having at least a portion of the seal surface exposed to gas flowing out the exhaust port ~~inside of the flange,~~ wherein the seal surface is configured to circumscribe a single exhaust port; and a graphite gasket located on the seal surface and configured to form a seal between the internal combustion engine and the flange.

11. (Original) The apparatus of Claim 10, wherein the flange is made of metal.

12. (Original) The apparatus of Claim 11, wherein the metal is iron.

13. (Original) The apparatus of Claim 10, wherein the flange comprises two bolt holes.

14. (Previously Presented) The apparatus of Claim 10, wherein the seal surface is recessed approximately 0.1 inches.

15. (Original) The apparatus of Claim 10, wherein the seal surface has a substantially annular shape.

16. (Original) The apparatus of Claim 10, wherein the seal surface has a substantially rectangular shape.

17. (Original) The apparatus of Claim 10, wherein a cross-sectional area of the passageway varies.

18. (Previously Presented) The apparatus of Claim 17, wherein the cross-sectional area increases.

19. (Currently Amended) A method for installing an exhaust header to a substantially flat surface of a multi-cylinder engine, the exhaust header having a plurality of exhaust pipes, each exhaust pipe being configured to collect exhaust gas from a cylinder of the multi-cylinder engine, the method comprising:

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providing an exhaust header having a plurality of flanges, each flange having a recessed sealing surface, at least a portion of the sealing surface being configured so as to support therein a gasket in a manner such that at least a portion of the gasket is exposed to gas flowing out the exhaust port ~~inside of the flange~~, wherein the sealing surface circumscribes an exhaust port from the cylinder;

placing a graphite gasket against each sealing surface in the plurality of flanges;
abutting each graphite gasket against a substantially flat surface of the multi-cylinder engine; and

individually compressing each graphite gasket against the substantially flat surface of the multi-cylinder engine so as to form a plurality of separate seals between the plurality of flanges and the substantially flat surface.

20. (Previously Presented) The method of Claim 19, wherein the graphite gasket protrudes beyond an outer surface of the flange.

21. (Currently Amended) An apparatus configured to attach an exhaust pipe to an engine head to form an exhaust header for collecting exhaust gases from one or more exhaust ports from a cylinder of an internal combustion engine, the apparatus comprising:

a flange having a passageway extending therethrough, said flange further comprising bolt holes for directly connecting the flange to the internal combustion engine, and a recessed seal surface configured so as to support therein a gasket in a manner such that at least a portion of the gasket is open to the passageway, wherein the recessed seal surface is configured to circumscribe a single exhaust port; and

a graphite gasket configured to be positioned against the seal surface and form a seal between the internal combustion engine and the flange.

22. (Currently Amended) A method for installing an exhaust header to a substantially flat surface of a multi-cylinder engine, the exhaust header having a plurality of exhaust pipes, each exhaust pipe being configured to collect exhaust gas from a cylinder of the multi-cylinder engine, the method comprising:

providing an exhaust header having a plurality of flanges, each flange having bolt holes for directly connecting the flanges to the multi-cylinder engine, and a recessed sealing surface, wherein the recessed sealing surface circumscribes an exhaust port from the cylinder, and wherein the recessed sealing surface is configured so as to support

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therein a gasket in a manner such that at least a portion of the gasket is exposed to gas flowing out the exhaust port;

placing a graphite gasket against each sealing surface in the plurality of flanges;
abutting each graphite gasket against a substantially flat surface of the multi-cylinder engine; and

individually compressing each graphite gasket against the substantially flat surface of the multi-cylinder engine so as to form a plurality of separate seals between the plurality of flanges and the substantially flat surface.